

**WHAT IS CLAIMED IS:**

1. An error detecting method comprising:  
generating an error detection code for a data block of an image frame; and  
inserting the generated error detection code within a byte alignment code of  
the data block.
  
2. The method of claim 1, further comprising transmitting the frame having the  
generated error detection code within the byte alignment code.
  
3. The method of claim 2, further comprising extracting the byte alignment code  
from the data block.
  
4. The method of claim 3, further comprising detecting errors within the frame  
based on the extracted byte alignment code.
  
5. The method of claim 4, wherein the errors comprise transmission errors.
  
6. The method of claim 1, wherein a number of bits of the generated error  
detection code is the same as a number of bits of the byte alignment code.
  
7. The method of claim 1, wherein the error detection code comprises at least  
one vertical parity checking bit.

8. The method of claim 1, wherein generating the error detection code comprises:

dividing a moving image into a plurality of image blocks;  
obtaining pixel values of each image block in each data block; and  
generating the error detection code for each data block.

9. The method of claim 8, wherein generating the error detection code further comprises:

determining a number of bits of a byte alignment code; and  
generating vertical parity bits of a same number as the determined number of bits.

10. The method of claim 9, wherein the number of bits (B) of the byte alignment code is determined by an equation,  $B = (8 - (N \%8) \%8)$ , in which N denotes a size of a data block.

11. The method of claim 9, wherein the parity bits are generated based on a vertical parity check.

12. The method of claim 1, wherein the data block comprises a number of bits in which the number of bits is a multiple of eight.

13. An error detecting method comprising:

providing an error detection code within an alignment field of an image block;

transmitting the image block having the error detection code; and

determining whether an error has occurred based on the transmitted image block having the error detection code.

14. The method of claim 13, wherein determining whether an error has occurred comprises:

extracting the error detection code from the transmitted image block; and

detecting errors based on the extracted error detection code.

15. The method of claim 13, wherein a number of bits of the error detection code is the same as a number of bits of the alignment code.

16. The method of claim 13, wherein providing the error detection code comprises:

dividing a moving image into a plurality of image blocks;

obtaining pixel values of each image block in each data block; and

generating the error detection code for each data block.

17. The method of claim 16, wherein generating the error detection code comprises:

determining a number of bits of the alignment code; and  
generating vertical parity bits of a same number as the determined number of  
bits.

18. The method of claim 17, wherein the number of bits (B) of the alignment code is determined by an equation,  $B = (8 - (N \% 8) \% 8)$ , in which N denotes a size of a data block.

19. An image transmitting system comprising:  
a first device to provide an error detection code within an alignment field of an image block; and  
a second device to transmit the image block having the error detection code within the alignment field.

20. The system of claim 19, further comprising:  
a third device to receive the transmitted image block having the error detection code within the alignment field; and  
a fourth device to determine whether an error has occurred based on transmitted image block received by the third device.

21. The system of claim 20, wherein the fourth device extracts the error detection code from the alignment field of the transmitted image block and detects errors based on the extracted error detection code.

22. An image receiving system comprising:  
a first device to receive a transmitted image block having an error detection code within an alignment field; and  
a second device to determine whether an error has occurred based on the transmitted image block received by the first device.

23. The system of claim 22, further comprising:  
a third device to provide the error detection code within the alignment field of the image block; and  
a fourth device to transmit the image block having the error detection code within the alignment field.

24. The system of claim 22, wherein the second device extracts the error detection code from the alignment field of the transmitted image block and detects errors based on the extracted error detection code.